

Readiness Checklist

Audit of PSS G3 Milestone 1

FINAL REPORT

T. Barsz – 11/24/2004
Page 1 of 11

Tom,

Would you please perform an audit of the PSS Gen-3 readiness for Milestone #1 ("Simulated Operation"). I have attached the most recent readiness checklist for that milestone (it will also shortly be posted on the design review web page).

I have asked to have the next progress review during the week of November 15th, and wish to have the audit successfully completed in time for that meeting.

Thanks - John

Readiness Checklist for PSS Generation-3 at 30-ID Milestone #1

Readiness for the PSS Generation-3 prototype at 30-ID comprises three distinct stages:

1. Design, installation, testing, and preparation for simulated operation (no front-end at 30-ID)
 - a. Milestone 1: Ready for Simulated Operation.
2. Simulated operation of the Gen-3 prototype, where all aspects of the system will be exercised
 - a. Milestone 2: Ready to take beam.
3. Initial tests with beam, floor coordinator and operator training, develop formal procedures, etc
 - a. Milestone 3: Operations hand-over.

Checklist for Milestone 1 - Part A		Completed	Approved	Current	DCC	Comments
1	Successfully pass an engineering Final Design Review	<input checked="" type="checkbox"/>	NA	NA	NA	Final Design Review was completed 4/27/04. See ASD Home Page.
2	Written responses provided to reviewer comments from the Final Design report	<input type="checkbox"/>	NA	NA	NA	Input is needed from Mohan. See item 6 of 10/12/04 Review Summary.
3	Design approval granted from the APS Radiation Safety Policy & Procedure Committee	<input type="checkbox"/>	NA	NA	NA	Pending results of 11/16/04 review.
4	Action items closed from PSS Gen-3 design and progress reviews	<input type="checkbox"/>	NA	NA	NA	1. ACD needs to approve removal of ASD-SI's responsibility for ESD for the Beamline pneumatic pressure switches. 2. T. Barsz to create method for controlling changes that may arise during commissioning.
5	Deliverables from the Statement of Work provided and verified	<input type="checkbox"/>	NA	NA	NA	Appendix B of the SOW needs to be completed by ASD Management.
6	Approved Requirements document	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Same document listed in Part B

DONE

ARRANGE WITH LANG

BEAMLINE SHUTTER ICD

BARSZ ECR FORM

COMPLETE BY NEXT REVIEW

Readiness Checklist

Audit of PSS G3 Milestone 1

FINAL REPORT

T. Barsz – 11/24/2004

Page 2 of 11

Checklist for Milestone 1 - Part A		Completed	Approved	Current	DCC	Comments
7	Approved Functional Description document	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8	Approved Interface Control document package	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Part C line 1
9	Approved Chain A Master Software Design document	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Part J line 1
10	Approved Chain B Master Software Design document	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Part J line 2
11	Approved Chain C Master Software Design document	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Part J line 3
12	Approved HMI Master Software Design document	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Part J line 4
13	Approved checkout procedure for making functional changes to non-ESD hardware and software (Chain-C PLC, HMI)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Part L line 6
14	Complete package of approved engineering drawings and parts lists for 30-ID prototype	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drawings have not been submitted to DCC. See J. Hawkins about parts list.
15	Checkout of prototype printed circuit boards complete and documented	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Records kept in unlocked file cabinet located in the ASD-SI Common Area
16	Offline hardware-in-the-loop simulator in place and operational	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Operation and construction of the the 30-ID Simulator was during 9/9/04 Review.
17	Checkout of validation test boxes complete and documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All but one drawing completed and approved. (Documentation not complete due to change in WBS numbers).
18	Installation, commissioning and shakedown testing of 30-ID prototype complete and documented	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Commissioning cannot take place until approved by G3 Review Committee. Installation is complete. Shakedown was performed using 100-page I/O List.
19	All necessary jumpers and forces needed for simulated operation in place and documented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Forces will not be required. Jumpers have not been completed.
20	ESD Chain validation completed using approved ESD (Chains A & B) validation package.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The original document needs to be reprinted and reapproved because it was used to record validation sign-offs.
21	Non-ESD verification completed using approved Non-ESD (Chain C and HMI) checkout package	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Per documents listed in Part L.
22	Temporary front-end shutters hooked up and functional	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auditor witnessed @ Sector 30 on 11/15/04. Shutters were connected to the G3 System, but not operating at the time. Shutters connected using unapproved wiring diagram
21	Detailed test/operation plan provided for 30-ID for simulated operation period.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Included in Commissioning Plan listed in Part L.

Readiness Checklist

Audit of PSS G3 Milestone 1

FINAL REPORT

T. Barsz – 11/24/2004

Page 5 of 11

- The following issues apply to the Statement of Work: The document number (4104-00000-00) for the Project Schedule referred to in section 6 of the Statement of Work is incorrect. R. Emerson stated that D. Lichry is responsible for Project Schedule. D. Lichry disagreed with R. Emerson's statement and commented that the only schedule he has is one that was provided to him months ago.

	Checklist for Milestone 1 - Part C Interface Control Documents Baseline Documents from Gen-3 SOW Matrix (Emerson) Date: 10/22/04	Completed	Approved	Current	DCC	Comments
1	4104-913051-00 Access Control Interlock System (ACIS) interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	4104-212015, 212016, 212080, 212086, 212087	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	21280 should be listed as 21281
3	4104-913054-00 Front End Shutters interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	4104-212017, 212018, 212020, 212081, 212082	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5	4104-913055-00 Beamline Shutters interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Awaiting approval by S. Sharma or P. DenHartog.
6	4104-210155 INTEGRAL SHUTTER DRAWINGS	DONE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Awaiting drawings from Mohan.
7	4104-913052-00 Front End Equipment Protection System (FE-EPS) interface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cannot be completed until requirements are provided by Mohan.
8	4104-212020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	4104-913053-00 Beamline Equipment Protection System (BL-EPS) interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
10	4104-210106, 210206, 210306	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11	4104-913056-00 DIW (De-Ionized Water) interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
12	4104-2120219, 212052, 212053, 212062, 212113	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	212113 was changed to 212225
13	4104-913124-00 Human Machine Interface (HMI)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	should be listed as 913057
14	4104-212025, 212061	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	212025 & 212061 have been incorporated into 913110
15	4104-913058-00 EPICS interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
16	4104-212054, 212062	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	212054 was deleted

Summary of audit results for Part C:

The checkboxes appearing in the DCC column were independently verified by DCC.

The auditor was told that all PSS G3 drawings have been approved, but not yet incorporated into the APS DCC.

The auditor was told that all drawings represent what has been actually installed.

Readiness Checklist

Audit of PSS G3 Milestone 1

FINAL REPORT

T. Barsz – 11/24/2004

Page 6 of 11

All drawings had approval signatures. The date of the SI Group Leader's signature on all of the drawings was observed to range from 10/14/04 -11/09/04..

Nearly all drawings were at the Pro/Intralink Engineering Release level. Several of the most recently approved drawings were at the Pro/Intralink Pending Release level.

Several of the drawings reviewed had different approval dates for the same revision. The Designer stated that this practice is in accordance with APS policies in that the revision number is not changed unless the drawing has been submitted to DCC.

The Designer stated that she was the only person allowed to make changes to the drawings. This practice was confirmed by the SI employee assisting the auditor with the review of the temporary Shutter installation at 30 ID.

Drawings 4104-210155 & 4104-250255 cannot be completed without assistance from Mohan Ramanathan.

Drawing 41043002-21280 appearing the 30 ID Drawing List (document no. 41043002-210001-00) should be listed as a reference, since it is part of the ACIS System.

Drawing 41043002-212127 does not appear on the above drawing list.

Drawing 41043002-21290 needs editing

Drawing 41043002-212245 is incorrect

Drawings 41043002-212236 and 41043002-212114 were not present for the auditor's review

The ASD-SI Group's installation the G3 system at 30-ID prior to design approval is in conflict with section 6.0 of the APS QA Plan: "Verification and validation of work shall be completed before approval and implementation of design."

Checklist for Milestone 1 - Part D PSS Mezzanine Controls Baseline Documents from Gen-3 SOW Matrix (Emerson) Date: 10/22/04		Completed	Approved	Current	DCC	Comments
1	104-212005 – 4104-212134	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

DONE

Summary of audit results for Part D:

These drawings are not completed and confirmed to not be in the APS DCC.

The ASD-SI Group's installation the G3 system at 30-ID prior to design approval is in conflict with section 6.0 of the APS QA Plan: "Verification and validation of work shall be completed before approval and implementation of design."

Readiness Checklist

Audit of PSS G3 Milestone 1

FINAL REPORT

T. Barsz – 11/24/2004
Page 7 of 11

	Checklist for Milestone 1 – Part E PSS Station Controls Baseline Documents from Gen-3 SOW Matrix (Emerson) Date: 10/22/04	Completed	Approved	Current	DCC	Comments
1	4104-210000 – 4104-210385	DONE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Summary of audit results for Part E:

These drawings are not completed and confirmed to not be in the APS DCC.

	Checklist for Milestone 1 – Part F Manual Validation Test Adapters Baseline Documents from Gen-3 SOW Matrix (Emerson) Date: 10/22/04	Completed	Approved	Current	DCC	Comments
1	410497-913100-00 Validation System Functional Description for the Generation 3 Personnel Safety System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	410497-913030-00 Validation System Input/Output Listing for the Generation 3 Personnel Safety System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	410497-913020-00 Validation System Requirements for the Generation 3 Personnel Safety System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	410497-913220-00 Validation System Validation for the Generation 3 Personnel Safety System	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Summary of audit results for Part F:

The checkboxes appearing in the DCC column were independently verified by DCC

	Checklist for Milestone 1 – Part G Test Cart, Station Test Box Cutout and Wiring, Test Box Test Adapter from Gen-3 SOW Matrix (Emerson) Date: 10/22/04	Completed	Approved	Current	DCC	Comments
1	410497-212136, 212146, 212147, 212148, 212232, 212246, 212247, 212248 Test and Validation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

30ID Status

- Software, Validations and Procedures
- Mezzanine and Station Boards
- EPICS
- Validation Equipment
- Carwardine “Show Me” successful
 - Requirements doc review

Software

- S30 Code done but not tested with new boards
- Validation Cart code must be done before 1/10 (changes to match new board)

Validations

- 3 full validations have been completed
 - Only 1 in December
- Progress being hampered by construction
 - Only had about 5 full days since Thanksgiving
- Installation of new boards, wiring changes and front-end 1/10 – 1/14
- Validations with new boards 1/10 – 1/21
- Group training 1/24 – 1/28
 - Must coordinate with shutdown
- All other training to follow (FC's, Users, etc.)

Validation Procedures

- Fine tuning after initial validations
 - Creating common naming convention (SOW)
- Revised to match new boards
- Final documentation updates 1/17 – 1 /21
- Continue making minor changes as others perform validations

Mezzanine and Station Boards

- Ordered
 - 15 Station Boards & 5 Mezzanine Boards
- Stuffed (Gary Crews)
 - 9 Station Boards & 3 Mezzanine Boards
 - S30ID, S26ID and Lab/Spares
- Remaining boards being stuffed by CIS
 - Due in January

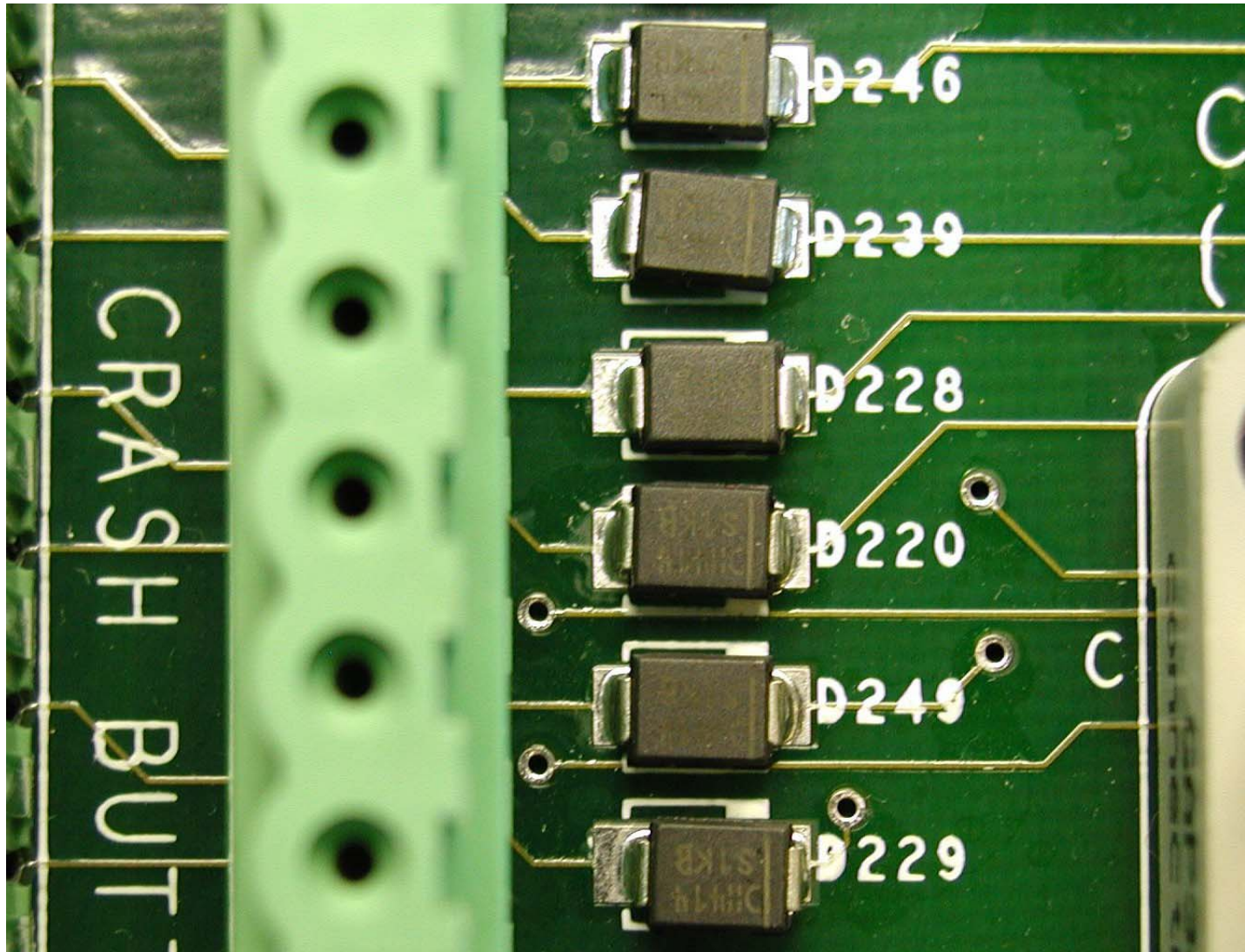
Mezzanine and Station Boards

- Testing (using Ken's procedure)
 - 1 Mezzanine board done
 - 3 Station boards done
 - To be used in S30
- Remaining boards to be tested as time permits
 - S26 1-Mezzanine 3-Station
 - Lab/Spare 1-Mezzanine 3-Station

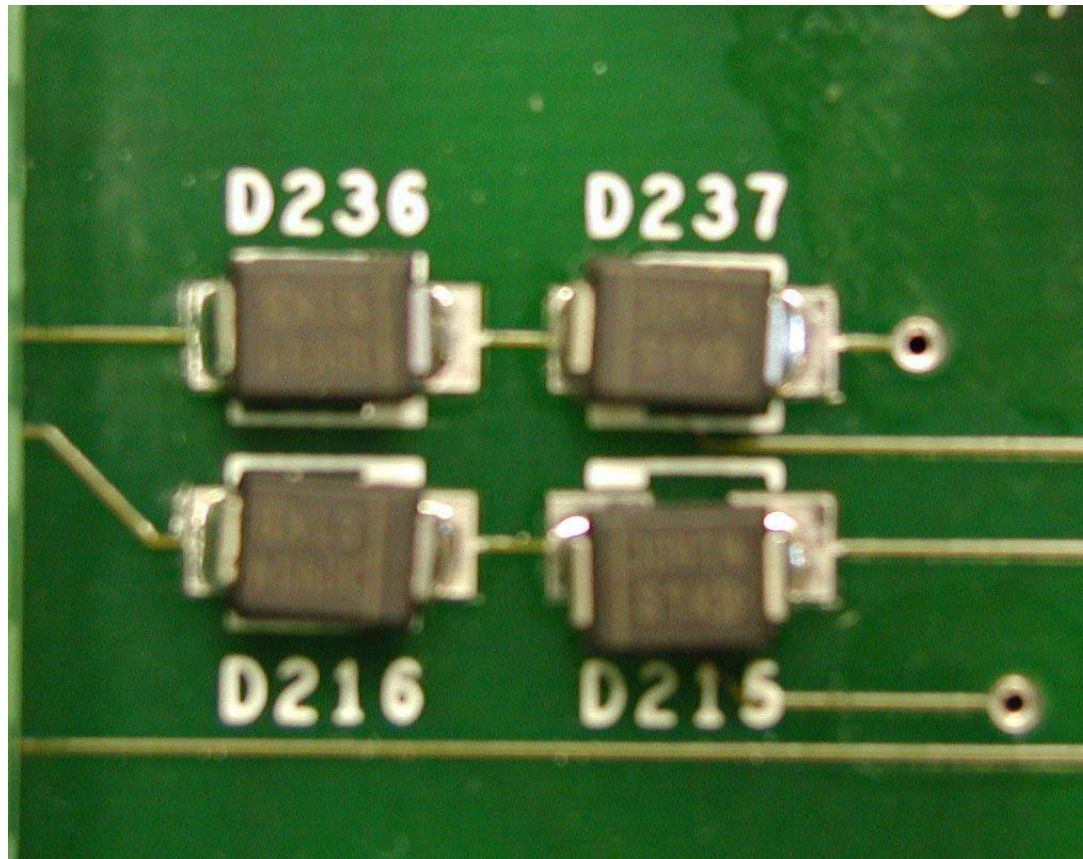
Mezzanine and Station Boards

- Quality
 - Boards look good
 - Stuffing by Gary Crew
 - Acceptable only because we need boards
 - Not Class 2 (but not spec'd class 2)
 - Waiting to see quality from CIS
- 2 minor mistakes found
 - Missing Trace (easy fix)
 - Station board Silk screen

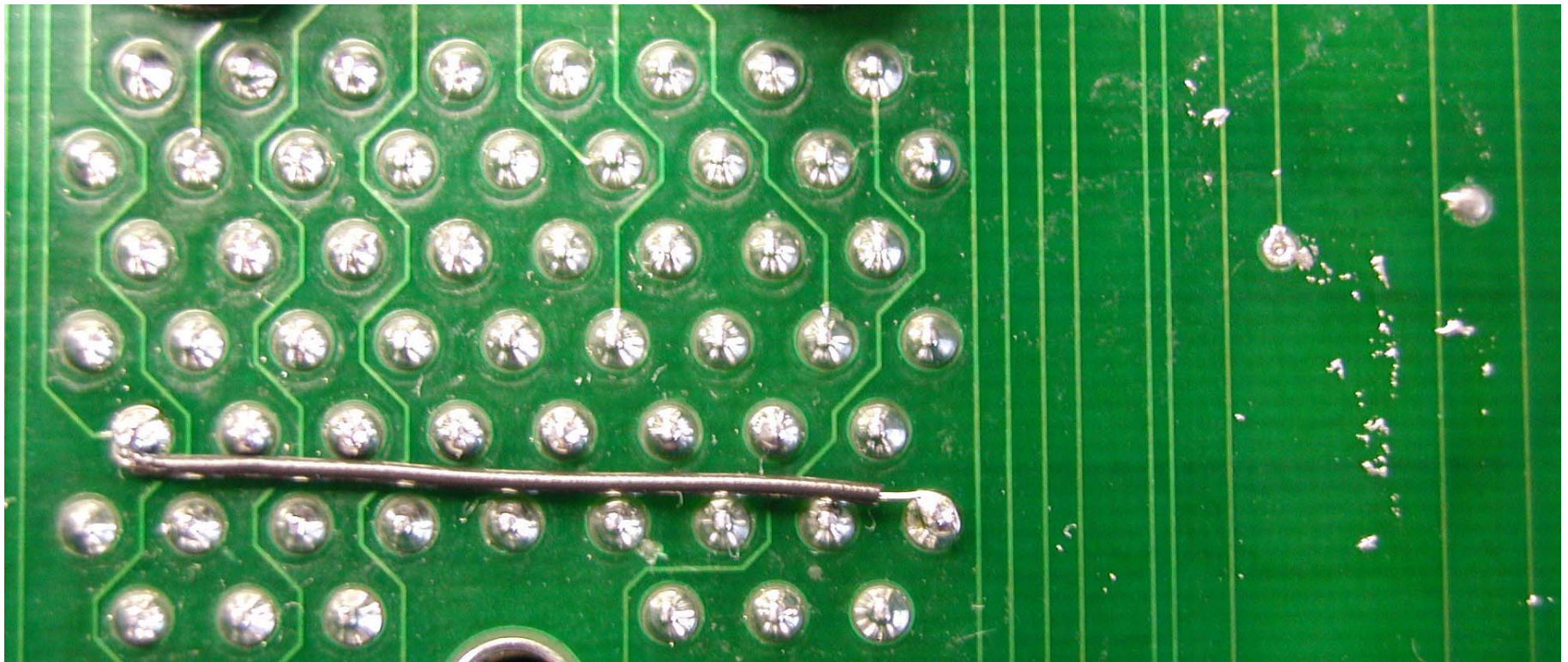
Class 2?



Class 2?



Class 2?



EPICS

- Roy is continuing to work on screens
- Screens are not working as of this writing
- Old style screens are being used now
- Phil and Greg are developing new user friendly screens similar to S31ID FEEPS
- Roy and Marty will implement

Old EPICS Main Screen

StationStatus03_G3.adl

30-ID Beamline

Global Online: OFF
ACIS Permit: OFF
FE-EPS Permit: OFF

BEAMLINE EPS INFORMATION

BL-EPS P5B	Permit: OFF	Status: OFF
BL-EPS P8C	Permit: OFF	Status: OFF
BL-EPS	Permit: OFF	Status: OFF
BL-EPS	Permit: OFF	Status: OFF
BL-EPS	Permit: OFF	Status: OFF
BL-EPS	Permit: OFF	Status: OFF
Mode 1:	Mode 3: OFF	
Mode 2:	Mode 4: OFF	

Status: ON = Closed OFF = OPEN/UNKNOWN
Stations: 3 Shutters: 2

30-ID Outputs

A Shutter Open:	Waiting
A Shutter Close:	Waiting
B Shutter Open:	Waiting
B Shutter Close:	Waiting
C Shutter Open:	Waiting
C Shutter Close:	Waiting
D Shutter Open:	Waiting
D Shutter Close:	Waiting

30-ID Station A

APS Enable: ON
User Enable: OFF
Secured: OFF
Beam Ready: OFF
Beam Active: OFF
Shtrs Closed: OFF

A Open A Close

30-ID Station B

APS Enable: OFF
User Enable: OFF
Secured: OFF
Beam Ready: OFF
Beam Active: OFF
Shtrs Closed: OFF

B Open B Close

30-ID Station C

APS Enable: ON
User Enable: OFF
Secured: OFF
Beam Ready: OFF
Beam Active: OFF
Shtrs Closed: OFF

C Open C Close

09-26-04 RE

PlcClx.adl

Chain A
30ID PLC Status

Logix5561

Run ☒ I/O
Force ☒ RS232
Ext ☒ OK

RUN REM PROG

PLC Time: : :
PLC Date: / /
Scan Time: ms
Max Scan: ms
Watch Dog: ms

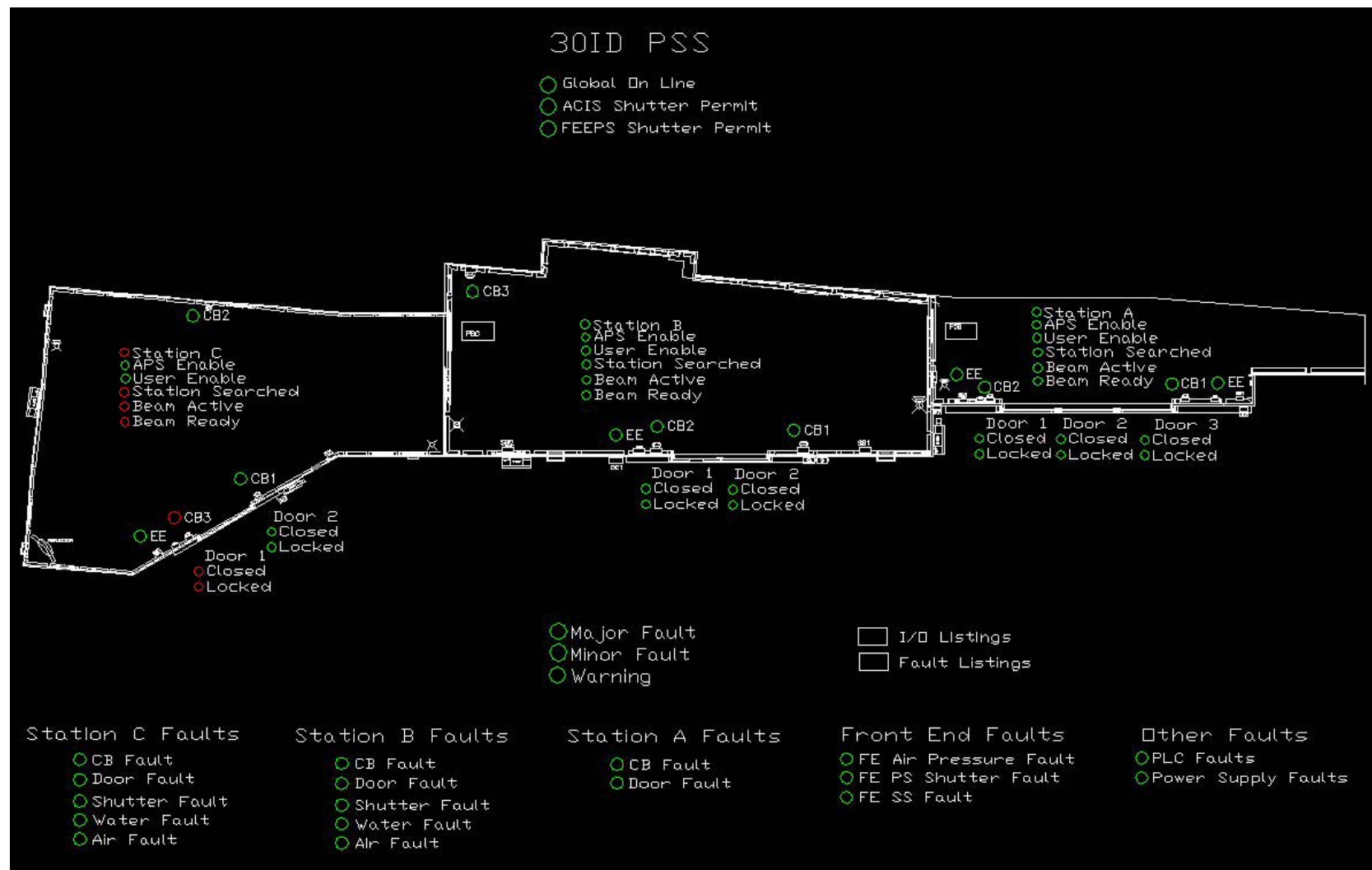
☐ Bad Battery
☐ Bad RAM Checksum
☐ Mode Switch in Remote
☐ Forces Enabled
☐ Forces Present
☐ Performing Online programming

Rack #1 2 3 4 5 6 7
FAULT 0 0 0 0 0 0
INHIBIT 0 0 0 0 0 0

(PLC) Major Fault Nbr
(PLC) Fault Code:
Faulted prog file:
Faulted rung:

Beamline : -
Software Ver:
Software Cks:

New EPICS Main Screen



Old I/O Screens

Outputs_30ID_AB.adl

30 ID Chain-A/B PSS Outputs

Chain-A	Chain-B
<input type="checkbox"/> 800 : OA PS1 PERMIT	<input type="checkbox"/> 800 : OB PS1 PERMIT
<input type="checkbox"/> 801 : OA PS2 PERMIT	<input type="checkbox"/> 801 : OB PS2 PERMIT
<input type="checkbox"/> 802 : OA SS1 PERMIT	<input type="checkbox"/> 802 : OB SS1 PERMIT
<input type="checkbox"/> 803 : OA SS2 PERMIT	<input type="checkbox"/> 803 : OB SS2 PERMIT
<input type="checkbox"/> 804 : OA PS1 CLSD LS ACIS	<input type="checkbox"/> 804 : OB PS1 CLSD LS ACIS
<input type="checkbox"/> 805 : OA PS1 OPND LS ACIS	<input type="checkbox"/> 805 : OB PS1 OPND LS ACIS
<input type="checkbox"/> 806 : OA PS2 CLSD LS ACIS	<input type="checkbox"/> 806 : OB PS2 CLSD LS ACIS
<input type="checkbox"/> 807 : OA PS2 OPND LS ACIS	<input type="checkbox"/> 807 : OB PS2 OPND LS ACIS
<input type="checkbox"/> 808 : OA SS1 CLSD LS ACIS	<input type="checkbox"/> 808 : OB SS1 CLSD LS ACIS
<input type="checkbox"/> 809 : OA SS1 OPND LS ACIS	<input type="checkbox"/> 809 : OB SS1 OPND LS ACIS
<input type="checkbox"/> 810 : OA SS2 CLSD LS ACIS	<input type="checkbox"/> 810 : OB SS2 CLSD LS ACIS
<input type="checkbox"/> 811 : OA SS2 OPND LS ACIS	<input type="checkbox"/> 811 : OB SS2 OPND LS ACIS
<input type="checkbox"/> 812 : OA PSS SR PERMIT	<input type="checkbox"/> 812 : OB PSS SR PERMIT
<input type="checkbox"/> 813 : OA TESTING ACK	<input type="checkbox"/> 813 : OB TESTING ACK
<input type="checkbox"/> 814 : OA CROSS TRIP TO B	<input type="checkbox"/> 814 : OB CROSS TRIP TO B
<input type="checkbox"/> 815 : OA WDTMR TO ESD B	<input type="checkbox"/> 815 : OB WDTMR TO ESD B
<input type="checkbox"/> 832 : OA STA A STROBE LT	<input type="checkbox"/> 832 : OB STA A STROBE LT
<input type="checkbox"/> 833 : OA STA A VOICE 1	<input type="checkbox"/> 833 : OB STA A VOICE 1
<input type="checkbox"/> 834 : OA STA A VOICE 2	<input type="checkbox"/> 834 : OB STA A VOICE 2
<input type="checkbox"/> 841 : OA SRCHD A TO ESD B	<input type="checkbox"/> 841 : OB SRCHD A TO ESD B
<input type="checkbox"/> 842 : OA STA A SB1 PL	<input type="checkbox"/> 842 : OB STA A SB1 PL
<input type="checkbox"/> 843 : OA STA A SB2 PL	<input type="checkbox"/> 843 : OB STA A SB2 PL
<input type="checkbox"/> 848 : OA A SH1 HS1 PERMIT	<input type="checkbox"/> 848 : OB A SH1 HS1 PERMIT
<input type="checkbox"/> 849 : OA A SH1 HS2 PERMIT	<input type="checkbox"/> 849 : OB A SH1 HS2 PERMIT
<input type="checkbox"/> 862 : OA A DR1 4 OPEN PRM	<input type="checkbox"/> 862 : OB A DR1 4 OPEN PRM
<input type="checkbox"/> 864 : OA STA B STROBE LT	<input type="checkbox"/> 864 : OB STA B STROBE LT
<input type="checkbox"/> 865 : OA STA B VOICE 1	<input type="checkbox"/> 865 : OB STA B VOICE 1
<input type="checkbox"/> 866 : OA STA B VOICE 2	<input type="checkbox"/> 866 : OB STA B VOICE 2
<input type="checkbox"/> 873 : OA SRCHD B TO ESD B	<input type="checkbox"/> 873 : OB SRCHD B TO ESD B
<input type="checkbox"/> 874 : OA STA B SB1 PL	<input type="checkbox"/> 874 : OB STA B SB1 PL
<input type="checkbox"/> 875 : OA STA B SB2 PL	<input type="checkbox"/> 875 : OB STA B SB2 PL
<input type="checkbox"/> 880 : OA B SH1 HS1 PERMIT	<input type="checkbox"/> 880 : OB B SH1 HS1 PERMIT
<input type="checkbox"/> 881 : OA B SH1 HS2 PERMIT	<input type="checkbox"/> 881 : OB B SH1 HS2 PERMIT
<input type="checkbox"/> 894 : OA B DR1 4 OPEN PRM	<input type="checkbox"/> 894 : OB B DR1 4 OPEN PRM
<input type="checkbox"/> 896 : OA STA C STROBE LT	<input type="checkbox"/> 896 : OB STA C STROBE LT
<input type="checkbox"/> 897 : OA STA C VOICE 1	<input type="checkbox"/> 897 : OB STA C VOICE 1
<input type="checkbox"/> 898 : OA STA C VOICE 2	<input type="checkbox"/> 898 : OB STA C VOICE 2
<input type="checkbox"/> 905 : OA SRCHD C TO ESD B	<input type="checkbox"/> 905 : OB SRCHD C TO ESD B
<input type="checkbox"/> 906 : OA STA C SB1 PL	<input type="checkbox"/> 906 : OB STA C SB1 PL
<input type="checkbox"/> 907 : OA STA C SB2 PL	<input type="checkbox"/> 907 : OB STA C SB2 PL
<input type="checkbox"/> 912 : OA C SH1 HS1 PERMIT	<input type="checkbox"/> 912 : OB C SH1 HS1 PERMIT
<input type="checkbox"/> 913 : OA C SH1 HS2 PERMIT	<input type="checkbox"/> 913 : OB C SH1 HS2 PERMIT
<input type="checkbox"/> 926 : OA C DR1 4 OPEN PRM	<input type="checkbox"/> 926 : OB C DR1 4 OPEN PRM

V-00 10/07/04
RE 10/06/04

Inputs_30ID_AB.adl

30 ID Chain-A/B PSS Inputs

Chain-A	Chain-B	Chain-A	Chain-B	Chain-A
<input type="checkbox"/> 49 : IA SOFT VERSION 01	<input type="checkbox"/> 49 : IB SOFT VERSION 01	<input type="checkbox"/> 136 : IA STA A SB1	<input type="checkbox"/> 143 : IB STA B TST DIS PHR	<input type="checkbox"/> 306 : IA STA D MINOR KEY
<input type="checkbox"/> 50 : IA SOFT VERSION 02	<input type="checkbox"/> 50 : IB SOFT VERSION 02	<input type="checkbox"/> 137 : IA STA A SB2	<input type="checkbox"/> 144 : IB A SH1 HS1 OPND LS	<input type="checkbox"/> 640 : MAJOR FAULT PRESENT
<input type="checkbox"/> 51 : IA SOFT VERSION 03	<input type="checkbox"/> 51 : IB SOFT VERSION 03	<input type="checkbox"/> 143 : IA STA A TST DIS PHR	<input type="checkbox"/> 145 : IB A SH1 HS1 CLSD LS	<input type="checkbox"/> 641 : MINOR FAULT PRESENT
<input type="checkbox"/> 52 : IA SOFT VERSION 04	<input type="checkbox"/> 52 : IB SOFT VERSION 04	<input type="checkbox"/> 144 : IA A SH1 HS1 OPND LS	<input type="checkbox"/> 146 : IB A SH1 HS2 OPND LS	<input type="checkbox"/> 672 : STATION A BEAM READY
<input type="checkbox"/> 53 : IA SOFT VERSION 05	<input type="checkbox"/> 53 : IB SOFT VERSION 05	<input type="checkbox"/> 145 : IA A SH1 HS1 CLSD LS	<input type="checkbox"/> 147 : IB A SH1 HS2 CLSD LS	<input type="checkbox"/> 673 : STATION A SEARCHED
<input type="checkbox"/> 54 : IA SOFT VERSION 06	<input type="checkbox"/> 54 : IB SOFT VERSION 06	<input type="checkbox"/> 146 : IA A SH1 HS2 OPND LS	<input type="checkbox"/> 168 : IB A SH1 PRESS OK	<input type="checkbox"/> 688 : STATION B BEAM READY
<input type="checkbox"/> 55 : IA SOFT VERSION 07	<input type="checkbox"/> 55 : IB SOFT VERSION 07	<input type="checkbox"/> 147 : IA A SH1 HS2 CLSD LS	<input type="checkbox"/> 176 : IB STA B USER KEY	<input type="checkbox"/> 689 : STATION B SEARCHED
<input type="checkbox"/> 56 : IA HARD LOCATION 00	<input type="checkbox"/> 56 : IB HARD LOCATION 00	<input type="checkbox"/> 168 : IA A SH1 PRESS OK	<input type="checkbox"/> 177 : IB STA B AFS KEY	<input type="checkbox"/> 704 : STATION C BEAM READY
<input type="checkbox"/> 57 : IA HARD LOCATION 01	<input type="checkbox"/> 57 : IB HARD LOCATION 01	<input type="checkbox"/> 176 : IA STA B USER KEY	<input type="checkbox"/> 184 : IB STA B DR1 CLOSED	<input type="checkbox"/> 705 : STATION C SEARCHED
<input type="checkbox"/> 58 : IA HARD LOCATION 02	<input type="checkbox"/> 58 : IB HARD LOCATION 02	<input type="checkbox"/> 177 : IA STA B AFS KEY	<input type="checkbox"/> 185 : IB STA B DR2 CLOSED	
<input type="checkbox"/> 59 : IA HARD LOCATION 03	<input type="checkbox"/> 59 : IB HARD LOCATION 03	<input type="checkbox"/> 178 : IA STA B MINOR KEY	<input type="checkbox"/> 192 : IB STA B CB1	
<input type="checkbox"/> 60 : IA HARD LOCATION 04	<input type="checkbox"/> 60 : IB HARD LOCATION 04	<input type="checkbox"/> 179 : IA STA B MAJOR KEY	<input type="checkbox"/> 193 : IB STA B CB2	
<input type="checkbox"/> 61 : IA HARD LOCATION 05	<input type="checkbox"/> 61 : IB HARD LOCATION 05	<input type="checkbox"/> 184 : IA STA B DR1 CLOSED	<input type="checkbox"/> 194 : IB STA B CB3	
<input type="checkbox"/> 62 : IA HARD LOCATION 06	<input type="checkbox"/> 62 : IB HARD LOCATION 06	<input type="checkbox"/> 185 : IA STA B DR2 CLOSED	<input type="checkbox"/> 205 : IB SRCHD B FRM ESD A	
<input type="checkbox"/> 63 : IA HARD LOCATION 07	<input type="checkbox"/> 63 : IB HARD LOCATION 07	<input type="checkbox"/> 192 : IA STA B CB1	<input type="checkbox"/> 207 : IB STA B TST DIS PHR	
<input type="checkbox"/> 64 : IA NONHONO FLOW 01	<input type="checkbox"/> 64 : IB NONHONO FLOW 01	<input type="checkbox"/> 193 : IA STA B CB2	<input type="checkbox"/> 208 : IB B SH1 HS1 OPND LS	
<input type="checkbox"/> 80 : IA ACIS GLBONLN	<input type="checkbox"/> 80 : IB ACIS GLBONLN	<input type="checkbox"/> 194 : IA STA B CB3	<input type="checkbox"/> 209 : IB B SH1 HS1 CLSD LS	
<input type="checkbox"/> 81 : IA ACIS FEPEPRMIT	<input type="checkbox"/> 81 : IB ACIS FEPEPRMIT	<input type="checkbox"/> 200 : IA STA B SB1	<input type="checkbox"/> 210 : IB B SH1 HS2 OPND LS	
<input type="checkbox"/> 82 : IA FEEPS FEPEPRMIT	<input type="checkbox"/> 82 : IB FEEPS FEPEPRMIT	<input type="checkbox"/> 201 : IA STA B SB2	<input type="checkbox"/> 211 : IB B SH1 HS2 CLSD LS	
<input type="checkbox"/> 83 : IA SHMAN LT 3 PSI	<input type="checkbox"/> 83 : IB SHMAN LT 3 PSI	<input type="checkbox"/> 207 : IA STA B TST DIS PHR	<input type="checkbox"/> 232 : IB B SH1 PRESS OK	
<input type="checkbox"/> 84 : IA SHMAN GT 60 PSI	<input type="checkbox"/> 84 : IB SHMAN GT 60 PSI	<input type="checkbox"/> 208 : IA B SH1 HS1 OPND LS	<input type="checkbox"/> 240 : IB STA C USER KEY	
<input type="checkbox"/> 86 : IA FAULT PRESENT CC	<input type="checkbox"/> 87 : IB ACIS TRIP TEST	<input type="checkbox"/> 209 : IA B SH1 HS1 CLSD LS	<input type="checkbox"/> 241 : IB STA C AFS KEY	
<input type="checkbox"/> 87 : IA ACIS TRIP TEST	<input type="checkbox"/> 90 : IB FES DISCONNECTED	<input type="checkbox"/> 210 : IA B SH1 HS2 OPND LS	<input type="checkbox"/> 242 : IB STA C MINOR KEY	
<input type="checkbox"/> 90 : IA FES DISCONNECTED	<input type="checkbox"/> 92 : IB HEZZ TEST DIS PHR	<input type="checkbox"/> 211 : IA B SH1 HS2 CLSD LS	<input type="checkbox"/> 243 : IB STA C MAJOR KEY	
<input type="checkbox"/> 92 : IA HEZZ TEST DIS PHR	<input type="checkbox"/> 93 : IB CROSS TRIP FROM A	<input type="checkbox"/> 232 : IA B SH1 PRESS OK	<input type="checkbox"/> 248 : IB STA C DR1 CLOSED	
<input type="checkbox"/> 93 : IA CROSS TRIP FROM B	<input type="checkbox"/> 96 : IB WDTMR FRM ESD A	<input type="checkbox"/> 240 : IA STA C USER KEY	<input type="checkbox"/> 249 : IB STA C DR2 CLOSED	
<input type="checkbox"/> 96 : IA WDTMR FRM ESD B	<input type="checkbox"/> 96 : IB PS1 OPND LS	<input type="checkbox"/> 241 : IA STA C AFS KEY	<input type="checkbox"/> 256 : IB STA C CB1	
<input type="checkbox"/> 96 : IA PS1 OPND LS	<input type="checkbox"/> 97 : IB PS1 CLOSED LS	<input type="checkbox"/> 242 : IA STA C MINOR KEY	<input type="checkbox"/> 257 : IB STA C CB2	
<input type="checkbox"/> 97 : IA PS1 CLOSED LS	<input type="checkbox"/> 98 : IB PS2 OPND LS	<input type="checkbox"/> 243 : IA STA C MAJOR KEY	<input type="checkbox"/> 258 : IB STA C CB3	
<input type="checkbox"/> 98 : IA PS2 OPND LS	<input type="checkbox"/> 99 : IB PS2 CLOSED LS	<input type="checkbox"/> 248 : IA STA C DR1 CLOSED	<input type="checkbox"/> 269 : IB SRCHD C FRM ESD A	
<input type="checkbox"/> 99 : IA PS2 CLOSED LS	<input type="checkbox"/> 100 : IB SS1 OPND LS	<input type="checkbox"/> 249 : IA STA C DR2 CLOSED	<input type="checkbox"/> 271 : IB STA C TST DIS PHR	
<input type="checkbox"/> 100 : IA SS1 OPND LS	<input type="checkbox"/> 101 : IB SS1 CLOSED LS	<input type="checkbox"/> 256 : IA STA C CB1	<input type="checkbox"/> 272 : IB C SH1 HS1 OPND LS	
<input type="checkbox"/> 101 : IA SS1 CLOSED LS	<input type="checkbox"/> 102 : IB SS2 OPND LS	<input type="checkbox"/> 257 : IA STA C CB2	<input type="checkbox"/> 273 : IB C SH1 HS1 CLSD LS	
<input type="checkbox"/> 102 : IA SS2 OPND LS	<input type="checkbox"/> 103 : IB SS2 CLOSED LS	<input type="checkbox"/> 258 : IA STA C CB3	<input type="checkbox"/> 274 : IB C SH1 HS2 OPND LS	
<input type="checkbox"/> 103 : IA SS2 CLOSED LS	<input type="checkbox"/> 112 : IB STA A USER KEY	<input type="checkbox"/> 264 : IA STA C SB1	<input type="checkbox"/> 275 : IB C SH1 HS2 CLSD LS	
<input type="checkbox"/> 112 : IA STA A USER KEY	<input type="checkbox"/> 113 : IB STA A AFS KEY	<input type="checkbox"/> 265 : IA STA C SB2	<input type="checkbox"/> 296 : IB C SH1 PRESS OK	
<input type="checkbox"/> 113 : IA STA A AFS KEY	<input type="checkbox"/> 114 : IB STA A MINOR KEY	<input type="checkbox"/> 271 : IA STA C TST DIS PHR	<input type="checkbox"/> 640 : MAJOR FAULT PRESENT	
<input type="checkbox"/> 114 : IA STA A MINOR KEY	<input type="checkbox"/> 115 : IB STA A MAJOR KEY	<input type="checkbox"/> 272 : IA C SH1 HS1 OPND LS	<input type="checkbox"/> 641 : MINOR FAULT PRESENT	
<input type="checkbox"/> 115 : IA STA A MAJOR KEY	<input type="checkbox"/> 120 : IB STA A DR1 CLOSED	<input type="checkbox"/> 273 : IA C SH1 HS1 CLSD LS	<input type="checkbox"/> 672 : STATION A BEAM READY	
<input type="checkbox"/> 120 : IA STA A DR1 CLOSED	<input type="checkbox"/> 121 : IB STA A DR2 CLOSED	<input type="checkbox"/> 274 : IA C SH1 HS2 OPND LS	<input type="checkbox"/> 673 : STATION A SEARCHED	
<input type="checkbox"/> 121 : IA STA A DR2 CLOSED	<input type="checkbox"/> 122 : IB STA A DR3 CLOSED	<input type="checkbox"/> 275 : IA C SH1 HS2 CLSD LS	<input type="checkbox"/> 688 : STATION B BEAM READY	
<input type="checkbox"/> 122 : IA STA A DR3 CLOSED	<input type="checkbox"/> 128 : IB STA A CB1	<input type="checkbox"/> 296 : IA C SH1 PRESS OK	<input type="checkbox"/> 689 : STATION B SEARCHED	
<input type="checkbox"/> 128 : IA STA A CB1	<input type="checkbox"/> 129 : IB STA A CB2	<input type="checkbox"/> 304 : IA STA D USER KEY	<input type="checkbox"/> 704 : STATION C BEAM READY	
<input type="checkbox"/> 129 : IA STA A CB2	<input type="checkbox"/> 141 : IB SRCHD A FRM ESD A	<input type="checkbox"/> 305 : IA STA D AFS KEY	<input type="checkbox"/> 705 : STATION C SEARCHED	

V-00 10/06/04
RE 10/06/04

New I/O Screen

Chain's A & B INPUTS

☐ Software Version 1
☐ Software Version 2
☐ Software Version 3
☐ Software Version 4
☐ Software Version 5
☐ Software Version 6
☐ Software Version 7
☐ Hardware Version 1
☐ Hardware Version 2
☐ Hardware Version 3
☐ Hardware Version 4
☐ Hardware Version 5
☐ Hardware Version 6
☐ Hardware Version 7
☐ NonHono Flow Off
☐ ACIS Global On Line
☐ ACIS Front End Shutter Permit
☐ FEEPS Front End Shutter Permit
☐ Shutter Manifold > 60PSI
☐ Shutter Manifold > 60PSI
☐ Faults present in Chain C
☐ ACIS Trip Test
☐ Front End Shutter Disconnected
☐ Mezz Test Connector Cover
☐ Cross Trip from Other Chain
☐ Watchdog Timer from Other Chain
☐ P31 Open Limit Switch
☐ P31 Close Limit Switch
☐ P32 Open Limit Switch
☐ P32 Close Limit Switch
☐ S31 Open Limit Switch
☐ S31 Close Limit Switch
☐ S32 Open Limit Switch
☐ S32 Close Limit Switch
☐ Station A User Key
☐ Station A APS Key
☐ Station A Door 1 Closed
☐ Station A Door 2 Closed
☐ Station A Door 3 Closed
☐ Station A Crash Button 1
☐ Station A Crash Button 2
☐ Station A Search Box 1
☐ Station A Search Box 2
☐ Station A Test Connector Cover
☐ Station B User Key
☐ Station B APS Key
☐ Station B Door 1 Closed
☐ Station B Door 2 Closed
☐ Station B Crash Button 1
☐ Station B Crash Button 2
☐ Station B Crash Button 3
☐ Station B Search Box 1
☐ Station B Search Box 2
☐ Station B Test Connector Cover
☐ Station B M31 Open Limit Switch
☐ Station B M31 Close Limit Switch
☐ Station B M32 Open Limit Switch
☐ Station B M32 Close Limit Switch
☐ Station B Shutter Pressure Switch
☐ Station C User Key
☐ Station C APS Key
☐ Station C Door 1 Closed
☐ Station C Door 2 Closed
☐ Station C Crash Button 1
☐ Station C Crash Button 2
☐ Station C Crash Button 3
☐ Station C Search Box 1
☐ Station C Search Box 2
☐ Station C Test Connector Cover
☐ Station C M31 Open Limit Switch
☐ Station C M31 Close Limit Switch
☐ Station C M32 Open Limit Switch
☐ Station C M32 Close Limit Switch
☐ Station C Shutter Pressure Switch
☐ Major Fault Present
☐ Minor Fault Present
☐ Station A Beam Ready
☐ Station A Searched
☐ Station B Beam Ready
☐ Station B Searched
☐ Station C Beam Ready
☐ Station C Searched

Chain's A & B OUTPUTS

☐ P31 Permit
☐ P32 Permit
☐ S31 Permit
☐ S32 Permit
☐ P31 Close Limit Switch to FEEPS
☐ P32 Close Limit Switch to FEEPS
☐ P31 Open Limit Switch to FEEPS
☐ P32 Open Limit Switch to FEEPS
☐ S31 Close Limit Switch to FEEPS
☐ S32 Close Limit Switch to FEEPS
☐ S32 Close Limit Switch to FEEPS
☐ Storage Ring Permit
☐ Cross Trip to Other Chain
☐ Watchdog Timer to Other Chain
☐ Station A Stroke
☐ Station A Voice 1
☐ Station A Voice 2
☐ Station A Searched to Other Chain
☐ Station A Search Box 1 Light
☐ Station A Search Box 2 Light
☐ Station A Door 1-4 Open Permit
☐ Station B Stroke
☐ Station B Voice 1
☐ Station B Voice 2
☐ Station B Searched to Other Chain
☐ Station B Search Box 1 Light
☐ Station B Search Box 2 Light
☐ Station B M31 Permit
☐ Station B M32 Permit
☐ Station B Door 1-4 Open Permit
☐ Station C Stroke
☐ Station C Voice 1
☐ Station C Voice 2
☐ Station C Searched to Other Chain
☐ Station C Search Box 1 Light
☐ Station C Search Box 2 Light
☐ Station C M31 Permit
☐ Station C M32 Permit
☐ Station C Door 1-4 Open Permit

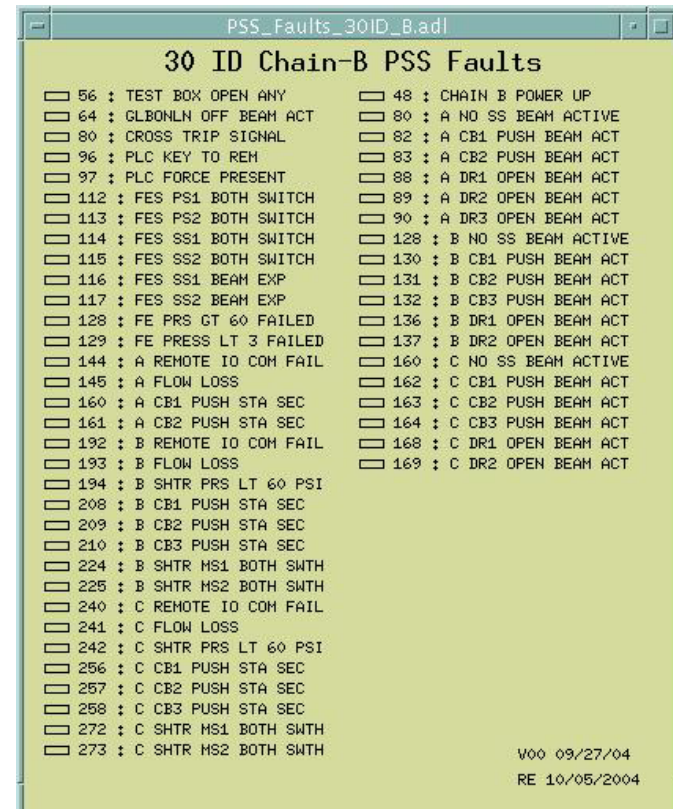
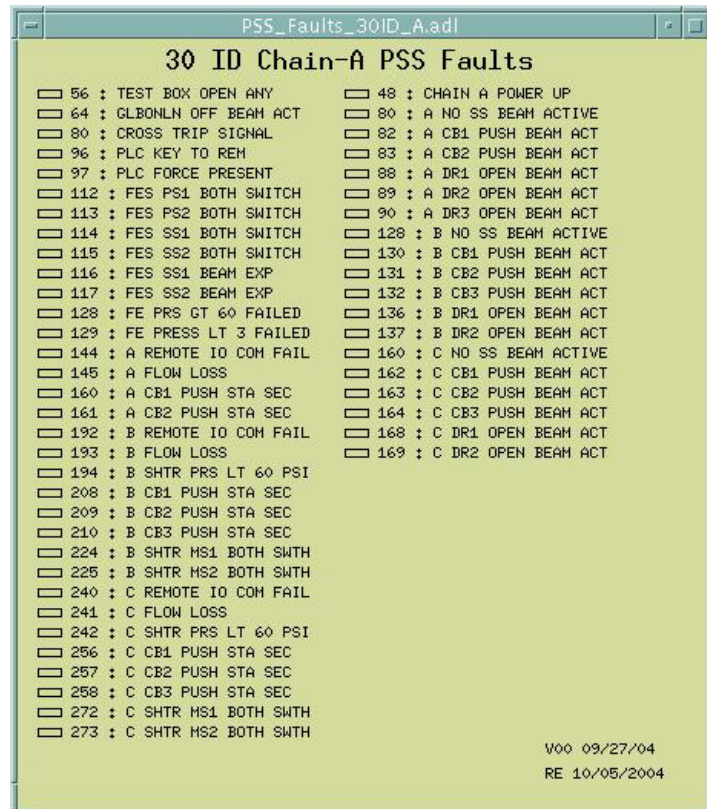
Chain C INPUTS

☐ Software Version 1
☐ Software Version 2
☐ Software Version 3
☐ Software Version 4
☐ Software Version 5
☐ Software Version 6
☐ Software Version 7
☐ Hardware Version 1
☐ Hardware Version 2
☐ Hardware Version 3
☐ Hardware Version 4
☐ Hardware Version 5
☐ Hardware Version 6
☐ Hardware Version 7
☐ NonHono Flow Off
☐ ACIS Global On Line
☐ ACIS Front End Shutter Permit
☐ FEEPS Front End Shutter Permit
☐ Shutter Manifold > 60PSI
☐ Shutter Manifold > 60PSI
☐ Faults present in Chain C
☐ ACIS Trip Test
☐ Front End Shutter Disconnected
☐ Mezz Test Connector Cover
☐ Cross Trip from Other Chain
☐ Watchdog Timer from Other Chain
☐ P31 Open Limit Switch
☐ P31 Close Limit Switch
☐ P32 Open Limit Switch
☐ P32 Close Limit Switch
☐ S31 Open Limit Switch
☐ S31 Close Limit Switch
☐ S32 Open Limit Switch
☐ S32 Close Limit Switch
☐ Station A User Key
☐ Station A APS Key
☐ Station A Door 1 Closed
☐ Station A Door 2 Closed
☐ Station A Door 3 Closed
☐ Station A Crash Button 1
☐ Station A Crash Button 2
☐ Station A Search Box 1
☐ Station A Search Box 2
☐ Station A Test Connector Cover
☐ Station B User Key
☐ Station B APS Key
☐ Station B Door 1 Closed
☐ Station B Door 2 Closed
☐ Station B Crash Button 1
☐ Station B Crash Button 2
☐ Station B Crash Button 3
☐ Station B Search Box 1
☐ Station B Search Box 2
☐ Station B Test Connector Cover
☐ Station B M31 Open Limit Switch
☐ Station B M31 Close Limit Switch
☐ Station B M32 Open Limit Switch
☐ Station B M32 Close Limit Switch
☐ Station B Shutter Pressure Switch
☐ Station C User Key
☐ Station C APS Key
☐ Station C Door 1 Closed
☐ Station C Door 2 Closed
☐ Station C Crash Button 1
☐ Station C Crash Button 2
☐ Station C Crash Button 3
☐ Station C Search Box 1
☐ Station C Search Box 2
☐ Station C Test Connector Cover
☐ Station C M31 Open Limit Switch
☐ Station C M31 Close Limit Switch
☐ Station C M32 Open Limit Switch
☐ Station C M32 Close Limit Switch
☐ Station C Shutter Pressure Switch
☐ Major Fault Present
☐ Minor Fault Present
☐ Station A Beam Ready
☐ Station A Searched
☐ Station B Beam Ready
☐ Station B Searched
☐ Station C Beam Ready
☐ Station C Searched

Chain C OUTPUTS

☐ Software Version 1
☐ Software Version 2
☐ Software Version 3
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☐ NonHono Flow Off
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☐ FEEPS Front End Shutter Permit
☐ Shutter Manifold > 60PSI
☐ Shutter Manifold > 60PSI
☐ Faults present in Chain C
☐ ACIS Trip Test
☐ Front End Shutter Disconnected
☐ Mezz Test Connector Cover
☐ Cross Trip from Other Chain
☐ Watchdog Timer from Other Chain
☐ P31 Open Limit Switch
☐ P31 Close Limit Switch
☐ P32 Open Limit Switch
☐ P32 Close Limit Switch
☐ S31 Open Limit Switch
☐ S31 Close Limit Switch
☐ S32 Open Limit Switch
☐ S32 Close Limit Switch
☐ Station A User Key
☐ Station A APS Key
☐ Station A Door 1 Closed
☐ Station A Door 2 Closed
☐ Station A Door 3 Closed
☐ Station A Crash Button 1
☐ Station A Crash Button 2
☐ Station A Search Box 1
☐ Station A Search Box 2
☐ Station A Test Connector Cover
☐ Station B User Key
☐ Station B APS Key
☐ Station B Door 1 Closed
☐ Station B Door 2 Closed
☐ Station B Crash Button 1
☐ Station B Crash Button 2
☐ Station B Crash Button 3
☐ Station B Search Box 1
☐ Station B Search Box 2
☐ Station B Test Connector Cover
☐ Station B M31 Open Limit Switch
☐ Station B M31 Close Limit Switch
☐ Station B M32 Open Limit Switch
☐ Station B M32 Close Limit Switch
☐ Station B Shutter Pressure Switch
☐ Station C User Key
☐ Station C APS Key
☐ Station C Door 1 Closed
☐ Station C Door 2 Closed
☐ Station C Crash Button 1
☐ Station C Crash Button 2
☐ Station C Crash Button 3
☐ Station C Search Box 1
☐ Station C Search Box 2
☐ Station C Test Connector Cover
☐ Station C M31 Open Limit Switch
☐ Station C M31 Close Limit Switch
☐ Station C M32 Open Limit Switch
☐ Station C M32 Close Limit Switch
☐ Station C Shutter Pressure Switch
☐ Major Fault Present
☐ Minor Fault Present
☐ Station A Beam Ready
☐ Station A Searched
☐ Station B Beam Ready
☐ Station B Searched
☐ Station C Beam Ready
☐ Station C Searched

Old Fault Screens



New Fault Screen

<p>PLC Faults</p> <p>Chain A B C</p> <ul style="list-style-type: none"> 000 PLC Power Cycled 000 Forces Present In PLC 000 PLC In Remote Program Mode 000 PLC Has Low Battery 000 Test Connector Cover Open 000 Remote I/O Communication Failure <p>Power Supply Faults</p> <p>Chain A B C</p> <ul style="list-style-type: none"> 000 Chain A PS Failed 000 Chain B PS Failed 000 Chain C PS Failed 000 Strobe & Lock PS Failed 000 Touch Panel PS Failed 		<p>Station B Faults</p> <p>Chain A B C</p> <ul style="list-style-type: none"> 000 CB1 Pushed while station secure 000 CB1 pushed while beam active 000 CB2 Pushed while station secure 000 CB2 pushed while beam active 000 CB3 Pushed while station secure 000 CB3 pushed while beam active 000 Door 1 Closed Switch Failed 000 Door 1 Lock Switch Failed 000 Door 1 opened while beam active 000 Door 2 Closed Switch Failed 000 Door 2 Lock Switch Failed 000 Door 2 opened while beam active 000 MS1 Closed Switch Failed 000 MS1 Opened Switch Failed 000 MS1 Failed to Close 000 MS1 Failed to Open 000 MS1 Indicated both open & closed 000 MS1 Is not Indication open or closed 000 MS2 Closed Switch Failed 000 MS2 Opened Switch Failed 000 MS2 Failed to Close 000 MS2 Failed to Open 000 MS2 Indicated both open & closed 000 MS2 Is not Indication open or closed 000 Low Water Flow to Shutter 000 Low Air Pressure to Shutter
<p>Front End Faults</p> <p>Chain A B C</p> <ul style="list-style-type: none"> 000 FE Air < 3 PSI Failed 000 FE Air > 60PSI Failed 000 PS1 Indicated both open & closed 000 PS1 Is not Indication open or closed 000 PS1 closed switch failed 000 PS1 open switch failed 000 PS1 failed to open 000 PS1 failed to close 000 PS2 Indicated both open & closed 000 PS2 Is not Indication open or closed 000 PS2 closed switch failed 000 PS2 open switch failed 000 PS2 failed to open 000 PS2 failed to close 000 SS1 Indicated both open & closed 000 SS1 Is not Indication open or closed 000 SS1 closed switch failed 000 SS1 open switch failed 000 SS1 failed to open 000 SS1 failed to close 000 SS1 closed without photon shutter protection 000 SS2 Indicated both open & closed 000 SS2 Is not Indication open or closed 000 SS2 closed switch failed 000 SS2 open switch failed 000 SS2 failed to open 000 SS2 failed to close 000 SS2 closed without photon shutter protection 		<p>Station C Faults</p> <p>Chain A B C</p> <ul style="list-style-type: none"> 000 CB1 Pushed while station secure 000 CB1 pushed while beam active 000 CB2 Pushed while station secure 000 CB2 pushed while beam active 000 CB3 Pushed while station secure 000 CB3 pushed while beam active 000 Door 1 Closed Switch Failed 000 Door 1 Lock Switch Failed 000 Door 1 opened while beam active 000 Door 2 Closed Switch Failed 000 Door 2 Lock Switch Failed 000 Door 2 opened while beam active 000 MS1 Closed Switch Failed 000 MS1 Opened Switch Failed 000 MS1 Failed to Close 000 MS1 Failed to Open 000 MS1 Indicated both open & closed 000 MS1 Is not Indication open or closed 000 MS2 Closed Switch Failed 000 MS2 Opened Switch Failed 000 MS2 Failed to Close 000 MS2 Failed to Open 000 MS2 Indicated both open & closed 000 MS2 Is not Indication open or closed 000 Low Water Flow to Shutter 000 Low Air Pressure to Shutter
<p>Station A Faults</p> <p>Chain A B C</p> <ul style="list-style-type: none"> 000 CB1 Pushed while station secure 000 CB1 pushed while beam active 000 CB2 Pushed while station secure 000 CB2 pushed while beam active 000 Door 1 Closed Switch Failed 000 Door 1 Lock Switch Failed 000 Door 1 opened while beam active 000 Door 2 Closed Switch Failed 000 Door 2 Lock Switch Failed 000 Door 2 opened while beam active 000 Door 3 Closed Switch Failed 000 Door 3 Lock Switch Failed 000 Door 3 opened while beam active 		

Existing Chain C Screens

Inputs_30ID_C.adl

30 ID Chain-C PSS Inputs

49 : IC ACIS FEPPERMIT

50 : IC FEEPS FEPPERMIT

51 : IC FEEPS PS1OPEN

52 : IC SHMAN LT 3 PSI

53 : IC SHMAN GT 60 PSI

55 : IC HEZZ DC POWER VA

56 : IC HEZZ DC POWER VB

57 : IC HEZZ DC POWER VC

58 : IC STROBE LOCK POWER

59 : IC HMI DC POWER

64 : IC FES DISCONNECTED

65 : IC CH C TEST DIS OUT

66 : IC TUNL TSTBOX CLSD

67 : IC HEZZ TSTBOX CLSD

68 : IC STA A TSTBOX CLSD

69 : IC STA B TSTBOX CLSD

70 : IC STA C TSTBOX CLSD

80 : IC STA A USER KEY

81 : IC STA A APS KEY

82 : IC STA A MINOR KEY

83 : IC STA A MAJOR KEY

96 : IC A BLEPS PERMIT 1

99 : IC A SH1 PRESS OK

100 : IC A SH2 PRESS OK

101 : IC A SH3 PRESS OK

102 : IC A SH1 PRESS OK

103 : IC A SH2 PRESS OK

104 : IC A SH3 PRESS OK

112 : IC STA A DR1 EGRESS

113 : IC STA A DR1 OPENPB

114 : IC STA A DR1 CLOSEPB

115 : IC STA A DR1 LOCKED

116 : IC STA A DR2 EGRESS

117 : IC STA A DR2 OPENPB

118 : IC STA A DR2 CLOSEPB

119 : IC STA A DR2 LOCKED

120 : IC STA A DR3 EGRESS

121 : IC STA A DR3 OPENPB

122 : IC STA A DR3 CLOSEPB

123 : IC STA A DR3 LOCKED

126 : IC STA B USER KEY

127 : IC STA B APS KEY

192 : IC B BLEPS PERMIT 1

195 : IC B SH1 PRESS OK A

198 : IC B SH1 PRESS OK B

208 : IC STA B DR1 EGRESS

209 : IC STA B DR1 OPENPB

210 : IC STA B DR1 CLOSEPB

211 : IC STA B DR1 LOCKED

212 : IC STA B DR2 EGRESS

213 : IC STA B DR2 OPENPB

214 : IC STA B DR2 CLOSEPB

215 : IC STA B DR2 LOCKED

272 : IC STA C USER KEY

273 : IC STA C APS KEY

288 : IC C BLEPS PERMIT 1

291 : IC C SH1 PRESS OK A

294 : IC C SH1 PRESS OK A

304 : IC STA C DR1 EGRESS

305 : IC STA C DR1 OPENPB

306 : IC STA C DR1 CLOSEPB

307 : IC STA C DR1

308 : IC STA C DR2

309 : IC STA C DR2

310 : IC STA C DR2

311 : IC STA C DR2

864 : STATION A BEI

865 : STATION A SEI

866 : STA A BEAM A

867 : STATION A USI

868 : STA A APS ENI

869 : ACIS Global I

870 : ACIS FE PERM

871 : FEEPS PERMIT

872 : PS1 OPEN REQI

880 : STATION B BEI

881 : STATION B SEI

882 : STA B BEAM A

883 : STATION B USI

884 : STA B APS ENI

895 : FB BLEPS PERI

896 : STATION C BEI

897 : STATION C SEI

898 : STA C BEAM A

899 : STATION C USI

900 : STA C APS ENI

911 : PC BLEPS PERI

992 : OC PS1 OPEN I

V=00
RE

PSS_Faults_30ID_C.adl

30 ID Chain-C PSS Faults

49 : CHAIN B PLC DEAD

50 : GLOBAL OFF BEAM ACT

55 : POWER UP

64 : TEST BOX OPEN HEZZ

65 : TEST BOX OPEN STA A

67 : TEST BOX OPEN STA C

80 : CHAIN A PROFBUS FAIL

81 : CHAIN B PROFBUS FAIL

96 : PLC KEY TO REM

97 : PLC FORCE PRESENT

104 : POWER FAIL 24V ESD A

105 : POWER FAIL 24V ESD B

106 : POWER FAIL 24VDC CC

107 : POWER FAIL 24VDC HMI

108 : POWER FAIL 24VDC HMI

128 : FES OPEN SEQ A

129 : FES CLOSE SEQ A

130 : FES PS1 CLSSH FAIL A

131 : FES PS1 OPNSH FAIL A

132 : FES PS1 BOTH SW A

133 : FES PS1 FAIL 2 OPN A

134 : FES PS1 FAIL 2 CLS A

135 : FES PS2 CLSSH FAIL A

136 : FES PS2 OPNSH FAIL A

137 : FES PS2 BOTH SW A

138 : FES PS2 FAIL 2 OPN A

139 : FES PS2 FAIL 2 CLS A

140 : FES SS1 CLSSH FAIL A

141 : FES SS1 OPNSH FAIL A

142 : FES SS1 BOTH SW A

143 : FES SS1 FAIL 2 OPN A

144 : FES SS1 FAIL 2 CLS A

145 : FES SS2 CLSSH FAIL A

146 : FES SS2 OPNSH FAIL A

147 : FES SS2 BOTH SW A

148 : FES SS2 FAIL 2 OPN A

149 : FES SS2 FAIL 2 CLS A

160 : FES OPEN SEQ B

161 : FES CLOSE SEQ B

162 : FES PS1 CLSSH FAIL B

163 : FES PS1 OPNSH FAIL B

164 : FES PS1 BOTH SW B

165 : FES PS1 FAIL 2 OPN B

166 : FES PS1 FAIL 2 CLS B

167 : FES PS2 CLSSH FAIL B

168 : FES PS2 OPNSH FAIL B

169 : FES PS2 BOTH SW B

170 : FES PS2 FAIL 2 OPN B

171 : FES PS2 FAIL 2 CLS B

172 : FES SS1 CLSSH FAIL B

173 : FES SS1 OPNSH FAIL B

174 : FES SS1 BOTH SW B

175 : FES SS1 FAIL 2 OPN B

176 : FES SS1 FAIL 2 CLS B

177 : FES SS2 CLSSH FAIL B

178 : FES SS2 OPNSH FAIL B

179 : FES SS2 BOTH SW B

180 : FES SS2 FAIL 2 OPN B

181 : FES SS2 FAIL 2 CLS B

192 : A REMOTE IO COM FAIL

224 : A DR1 CLS SW FAIL A

225 : A DR2 CLS SW FAIL A

226 : A DR3 CLS SW FAIL A

240 : A DR1 CLS SW FAIL B

241 : A DR2 CLS SW FAIL B

242 : A DR3 CLS SW FAIL B

256 : B REMOTE IO COM FAIL

288 : B DR1 CLS SW FAIL A

289 : B DR2 CLS SW FAIL A

304 : B DR3 CLS SW FAIL A

320 : B DR2 CLS SW FAIL B

320 : B HS1 CLS SW FAIL A

321 : B HS1 OPN SW FAIL A

322 : B HS1 BOTH SW A

323 : B HS1 FAIL 2 OPN A

324 : B HS1 FAIL 2 CLS A

325 : B HS2 CLS SW FAIL A

326 : B HS2 OPN SW FAIL A

327 : B HS2 BOTH SW A

328 : B HS2 FAIL 2 OPN A

329 : B HS2 FAIL 2 CLS A

352 : B HS1 CLS SW FAIL B

353 : B HS1 OPN SW FAIL B

354 : B HS1 BOTH SW B

355 : B HS1 FAIL 2 OPN B

356 : B HS1 FAIL 2 CLS B

357 : B HS2 CLS SW FAIL B

358 : B HS2 OPN SW FAIL B

359 : B HS2 BOTH SW B

360 : B HS2 FAIL 2 OPN B

361 : B HS2 FAIL 2 CLS B

384 : C REMOTE IO COM FAIL

400 : C HIDE RST BEAM ACT

416 : C DR1 CLS SW FAIL A

417 : C DR2 CLS SW FAIL A

418 : C DR3 CLS SW FAIL A

419 : C DR4 CLS SW FAIL A

420 : C DR5 CLS SW FAIL A

421 : C DR6 CLS SW FAIL A

422 : C DR7 CLS SW FAIL A

423 : C DR8 CLS SW FAIL A

432 : C DR1 CLS SW FAIL B

433 : C DR2 CLS SW FAIL B

434 : C DR3 CLS SW FAIL B

435 : C DR4 CLS SW FAIL B

436 : C DR5 CLS SW FAIL B

437 : C DR6 CLS SW FAIL B

438 : C DR7 CLS SW FAIL B

439 : C DR8 CLS SW FAIL B

448 : C HS1 CLS SW FAIL A

449 : C HS1 OPN SW FAIL A

450 : C HS1 BOTH SW A

451 : C HS1 FAIL 2 OPN A

452 : C HS1 FAIL 2 CLS A

453 : C HS2 CLS SW FAIL A

454 : C HS2 OPN SW FAIL A

455 : C HS2 BOTH SW A

456 : C HS2 FAIL 2 OPN A

457 : C HS2 FAIL 2 CLS A

458 : C PS CLS SW FAIL A

459 : C PS OPN SW FAIL A

460 : C PS BOTH SW A

461 : C PS FAIL 2 OPN A

462 : C PS FAIL 2 CLS A

463 : C SS CLS SW FAIL A

464 : C SS OPN SW FAIL A

465 : C SS BOTH SW A

466 : C SS FAIL 2 OPN A

467 : C SS FAIL 2 CLS A

468 : C HS1 CLS SW FAIL B

469 : C HS1 OPN SW FAIL B

482 : C HS1 BOTH SW B

483 : C HS1 FAIL 2 OPN B

484 : C HS1 FAIL 2 CLS B

485 : C HS2 CLS SW FAIL B

486 : C HS2 OPN SW FAIL B

487 : C HS2 BOTH SW B

488 : C HS2 FAIL 2 OPN B

489 : C HS2 FAIL 2 CLS B

490 : C PS CLS SW FAIL B

491 : C PS OPN SW FAIL B

492 : C PS BOTH SW B

493 : C PS FAIL 2 OPN B

494 : C PS FAIL 2 CLS B

495 : C SS CLS SW FAIL B

496 : C SS OPN SW FAIL B

497 : C SS BOTH SW B

498 : C SS FAIL 2 OPN B

499 : C SS FAIL 2 CLS B

1152 : CHAIN-A PLC BAT LOW

1153 : CHAIN-B PLC BAT LOW

1154 : CHAIN-C PLC BAT LOW

1160 : ACIS TRP TST CHAIN A

1161 : ACIS TRP TST CHAIN B

1216 : A DR1 LOCK SW FAIL

1217 : A DR2 LOCK SW FAIL

1218 : A DR1 LOCK SW FAIL

1248 : B DR1 LOCK SW FAIL

1249 : B DR2 LOCK SW FAIL

1280 : C DR1 LOCK SW FAIL

1281 : C DR2 LOCK SW FAIL

V=00
RE

Outputs_30ID_C.adl

30 ID Chain-C PSS Faults

993 : OC PS2 OPEN CHD

994 : OC SS1 OPEN CHD

995 : OC SS2 OPEN CHD

1000 : OC FAULT TO ESD A

1008 : OC STA A KEYCLICK

1009 : OC STA A ERRORBUZ

1012 : OC STA A APS TOAB

1013 : OC STA A ACCESS STAT

1021 : OC STA A SH1 TO BLEPS

1024 : OC STA A DR1 OP CHD

1025 : OC STA A DR1 CL CHD

1026 : OC STA A DR1 LK CHD

1027 : OC STA A DR1 CL PL

1028 : OC STA A DR1 LK PL

1029 : OC STA A DR1 ERROR

1030 : OC STA A DR1 CLICK

1031 : OC STA A DR2 OP CHD

1127 : OC STA B DR2 OP CHD

1128 : OC STA B DR2 CL CHD

1129 : OC STA B DR2 LK CHD

1130 : OC STA B DR2 CL PL

1131 : OC STA B DR2 LK PL

1132 : OC STA B DR2 ERROR

1133 : OC STA B DR2 CLICK

1152 : OC B SH1 HS1 OPEN

1153 : OC B SH1 HS2 OPEN

1200 : OC STA C KEYCLICK

1201 : OC STA C ERRORBUZ

1204 : OC STA C APS TOAB

1205 : OC STA C ACCESS STAT

1213 : OC STA C SH1 TO BLEPS

1216 : OC STA C DR1 OP CHD

1217 : OC STA C DR1 CL CHD

1218 : OC STA C DR1 LK CHD

1219 : OC STA C DR1 CL PL

1220 : OC STA C DR1 LK PL

1221 : OC STA C DR1 ERROR

1222 : OC STA C DR1 CLICK

1223 : OC STA C DR2 OP CHD

1224 : OC STA C DR2 CL CHD

1225 : OC STA C DR2 LK CHD

1226 : OC STA C DR2 CL PL

1227 : OC STA C DR2 LK PL

1228 : OC STA C DR2 ERROR

1229 : OC STA C DR2 CLICK

1248 : OC C SH1 HS1 OPEN

1249 : OC C SH1 HS2 OPEN

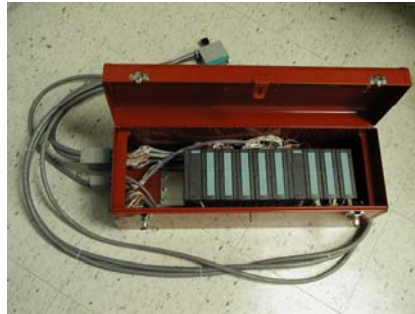
V=00
RE

V=00
RE

V=00 09/26/04
RE 10/05/2004

Validation Equipment

- Existing
 - Maytag
 - Mezzanine Test Box
 - 3 Station Test Boxes
- No Spares
 - We do have parts for 1 Test Box (need 2)
 - Plan to build with different enclosure
 - Spare cables also need to be fabricated



Sector 26 Gen 3 Installation

- Installation progressing using S30ID drawings
- Documentation and drawings are the same with only minor changes
- Full package will be assembled in February
- Parts 95% Install 2%
- BLEPS – Got requirements list 12/23
- FEEPS – 70% Complete

Simulator

- Discussing need for “hardware in the loop” simulator
- Van is investigating software emulator
- Ken will be developing board tester

S30 & S26 BLEPS

- S30
 - Received requirements Nov 04
 - Still need to write code
 - Ready for beam in A Hutch Feb 14-15
- S26
 - Received requirements Dec. 23, 04
 - Still need to install hardware and write code
 - Ready for beam in A Hutch Feb 28 - Mar 1

DIW LOVE Controllers

- Still using LOVE controllers for S30 and S26
- Will develop replacement solution before next Gen3 install

Gen 3's Future

- I'm Comfortable
- Engineers are comfortable
- It's an excellent product
- What do you think?